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PATENT & TRADEMARK OFFICE
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FIG. 1

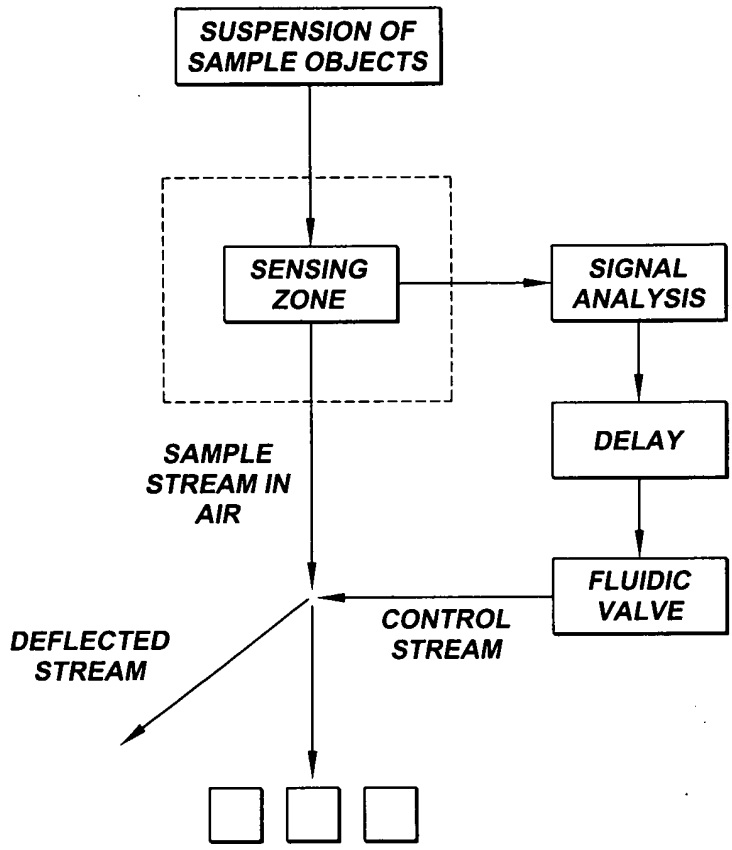

FIG.2

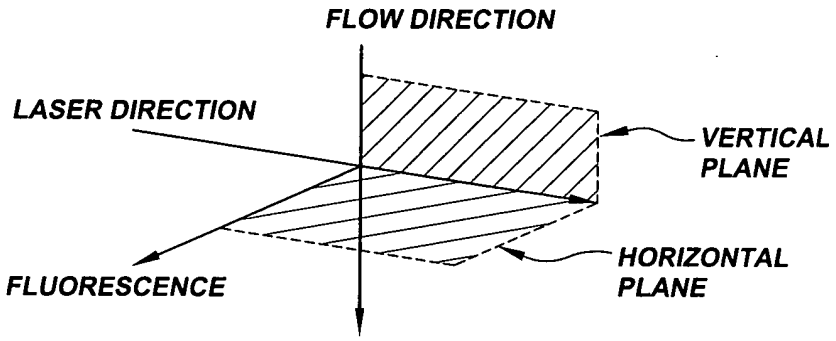
FLOW DIRECTION
LASER DIRECTION
VERTICAL PLANE
HORIZONTAL PLANE
FLUORESCENCE

FIG.3A

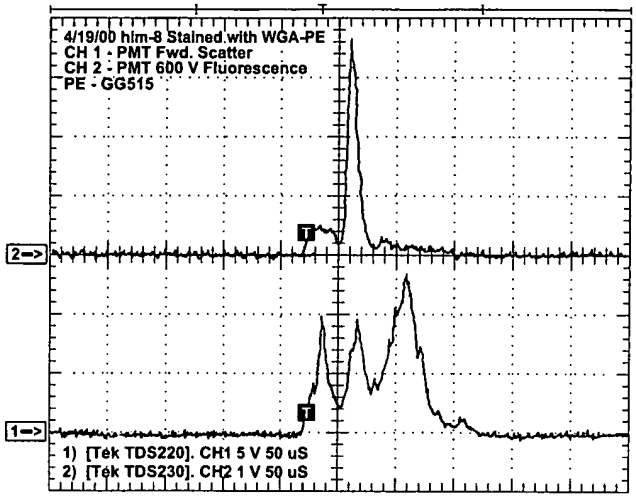
4/19/00 him-8 Stained with WGA-PE
CH 1 - PMT Fwd. Scatter
CH 2 - PMT 600 V Fluorescence
PE - GG515
2->
1->
1) [Tek TDS220]. CH1 5 V 50 uS
2) [Tek TDS230]. CH2 1 V 50 uS

FIG.3B

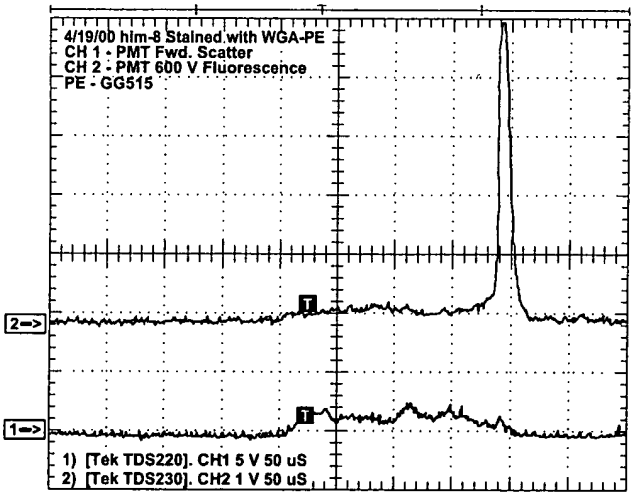
4/19/00 him-8 Stained with WGA-PE
CH 1 - PMT Fwd. Scatter
CH 2 - PMT 600 V Fluorescence
PE - GG515
2->
1->
1) [Tek TDS220]. CH1 5 V 50 uS
2) [Tek TDS230]. CH2 1 V 50 uS

FIG.4

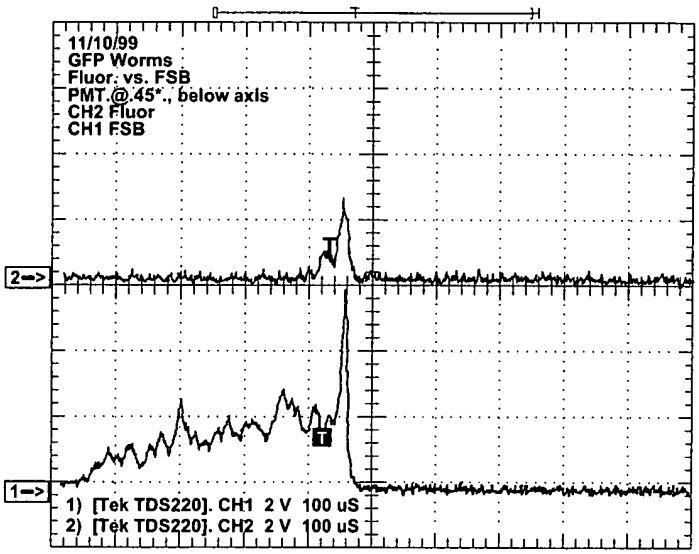
11/10/99
GFP Worms
Fluor. vs. FSB
PMT @ 45°., below axis
CH2 Fluor
CH1 FSB
2->
1->
1) [Tek TDS220]. CH1 2 V 100 uS
2) [Tek TDS220]. CH2 2 V 100 uS

FIG.5

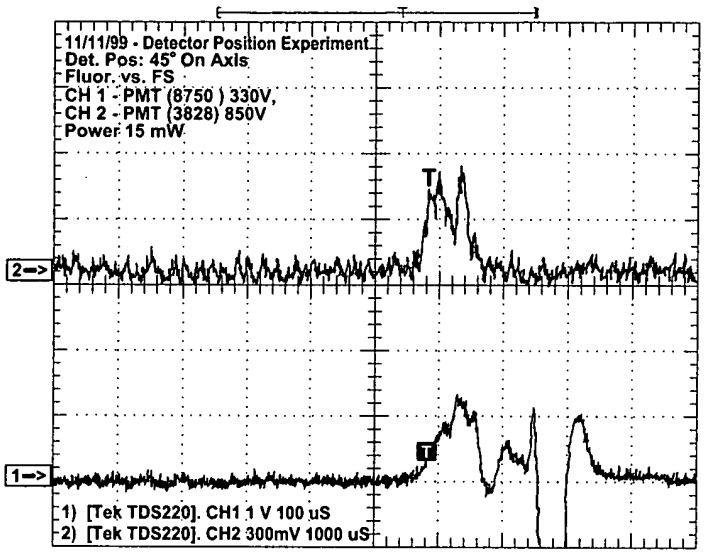
11/11/99 - Detector Position Experiment
Det. Pos: 45° On Axis
Fluor. vs. FS
CH 1 - PMT (8750) 330V,
CH 2 - PMT (3828) 850V
Power 15 mW
2=>
1=>
1) [Tek TDS220]. CH1 1 V 100 uS
2) [Tek TDS220]. CH2 300mV 1000 uS

FIG.6

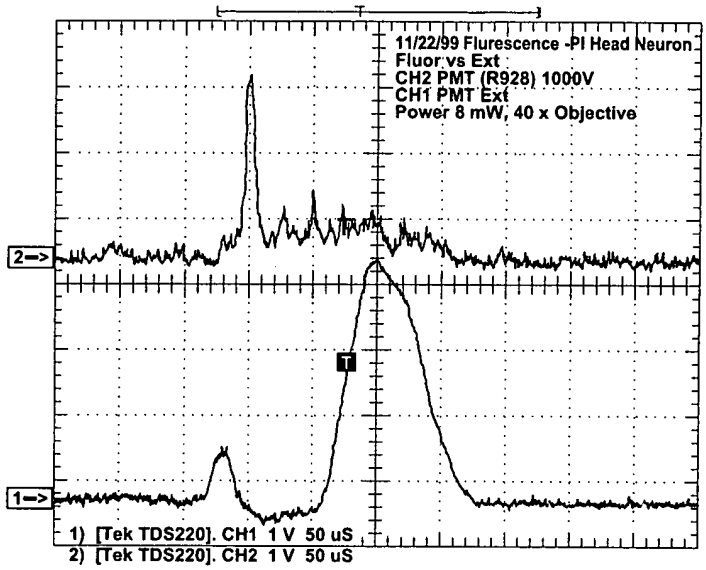
11/22/99 Flurescence -PI Head Neuron
Fluor vs Ext
CH2 PMT (R928) 1000V
CH1 PMT Ext
Power 8 mW, 40 x Objective
2->
1->
T
1) [Tek TDS220]. CH1 1 V 50 uS
2) [Tek TDS220]. CH2 1 V 50 uS

FIG.7

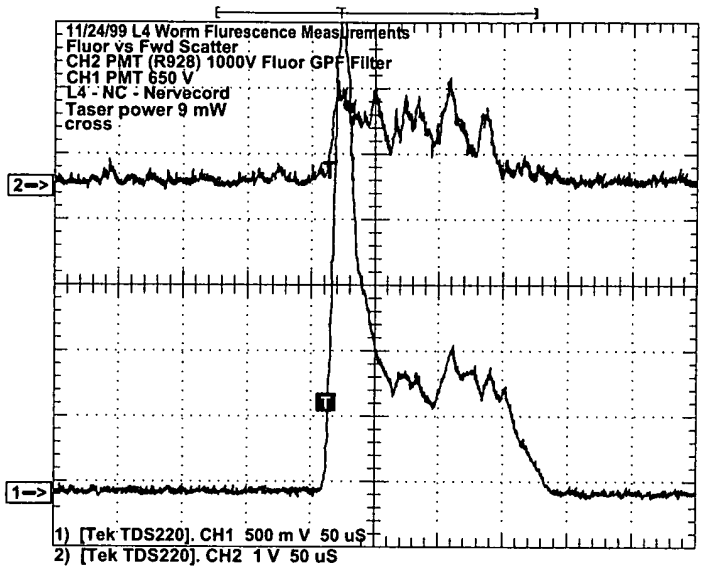
11/24/99 L4 Worm Flurescence Measurements
Fluor vs Fwd Scatter
CH2 PMT (R928) 1000V Fluor GPF Filter
CH1 PMT 650 V
L4 - NC - Nervecord
Taser power 9 mW
cross
2->
1->
T
1) [Tek TDS220]. CH1 500 m V 50 uS
2) [Tek TDS220]. CH2 1 V 50 uS

FIG.8

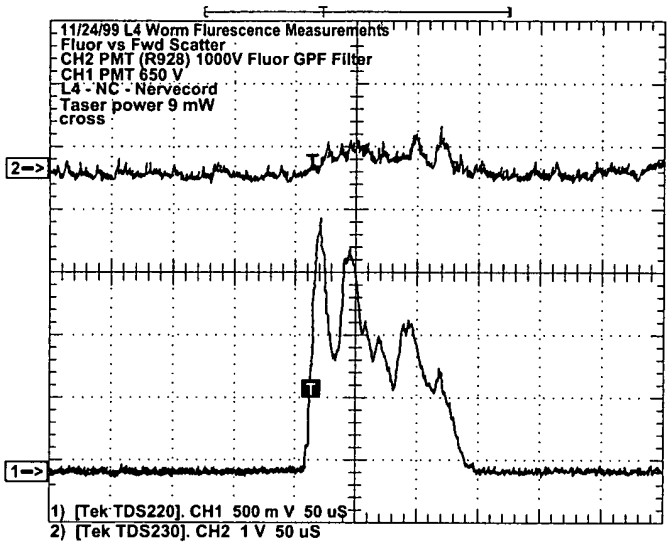
11/24/99 L4 Worm Fluorescence Measurements
Fluor vs Fwd Scatter
CH2 PMT (R928) 1000V Fluor GPF Filter
CH1 PMT 650 V
L4 - NC - Nervecord
Taser power 9 mW
cross
2->
1->
1) [Tek TDS220]. CH1 500 m V 50 uS
2) [Tek TDS230]. CH2 1 V 50 uS

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FIG.9A

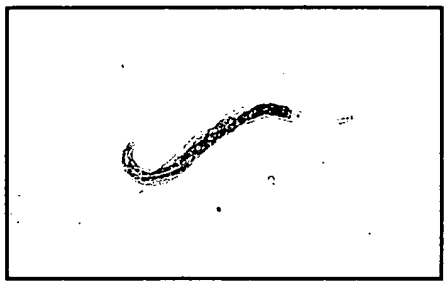

FIG.9B

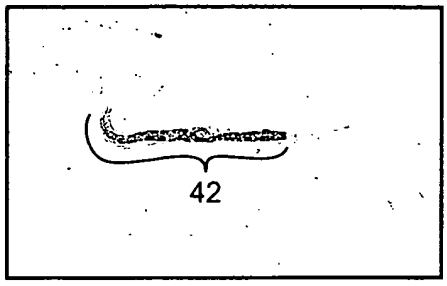

FIG.9C

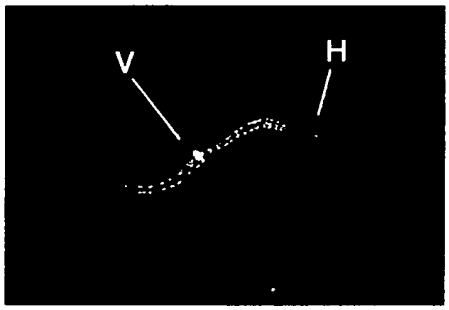

FIG.9D

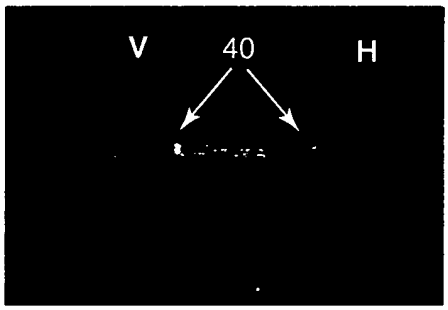

FIG.10A

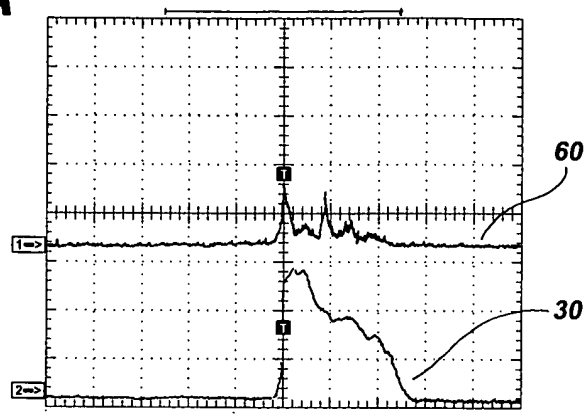

FIG.10B

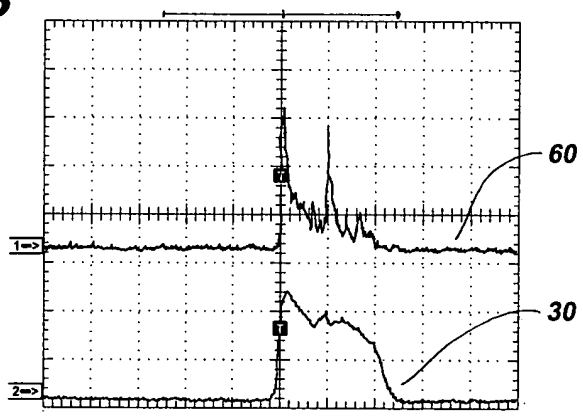

FIG.10C

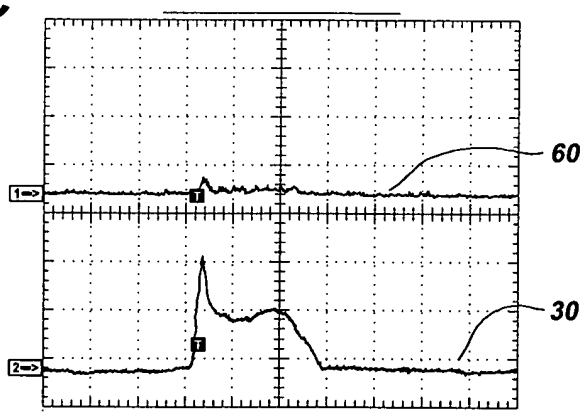

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FIG.11A

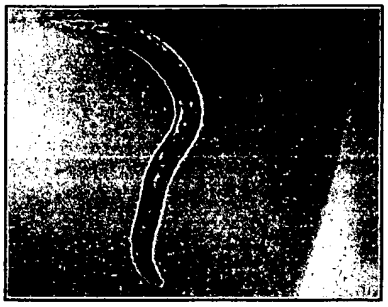


FIG.11B

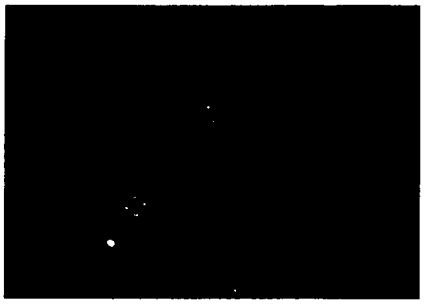


FIG.11C

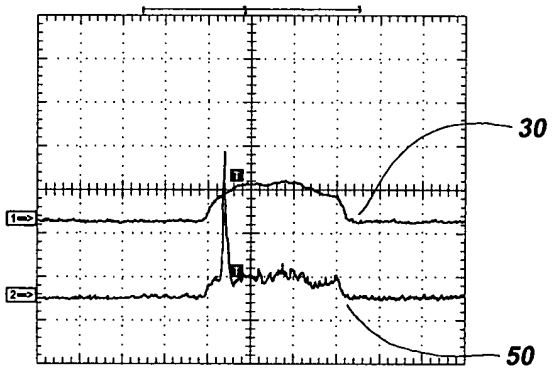


FIG.11D

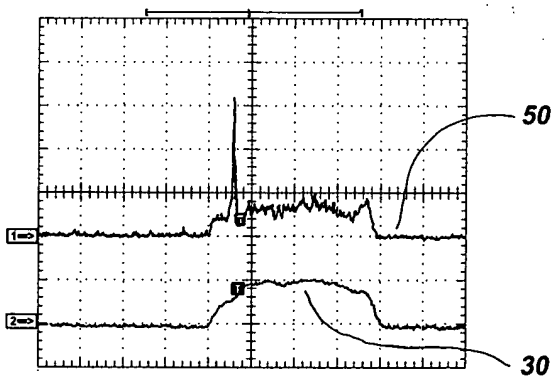


FIG.12

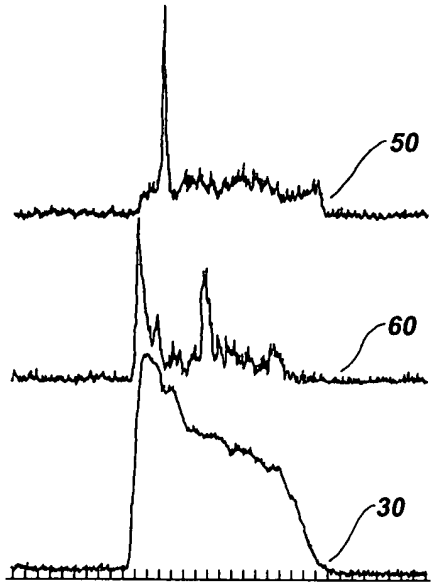
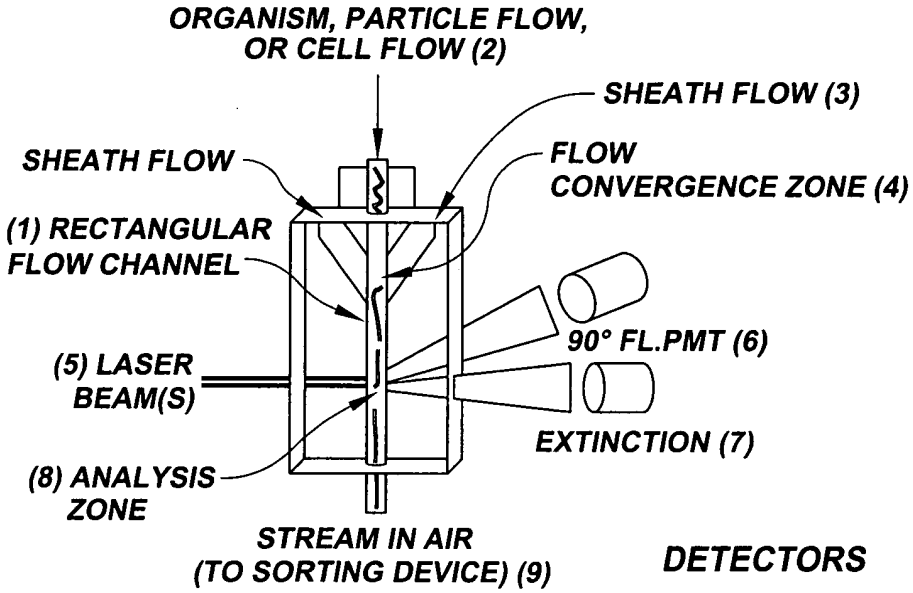


FIG.13



DETECTORS

RED LASER (10)

TIME OF FLIGHT
AND
BLUE LASER (11)

FLUORESCENCE

FIG.14

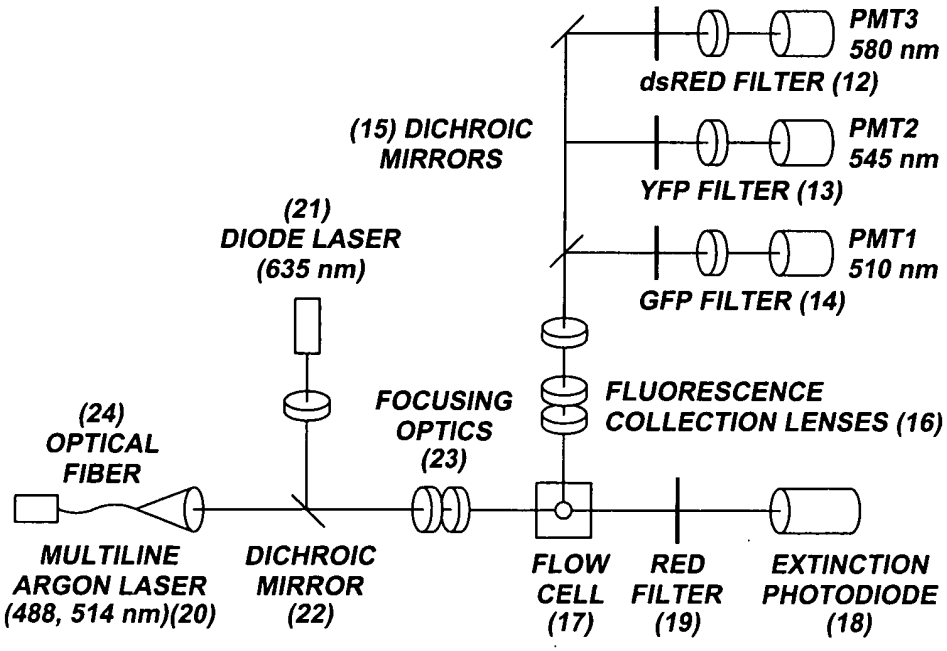

PMT3
580 nm
dsRED FILTER (12)
(15) DICHROIC
MIRRORS
PMT2
545 nm
YFP FILTER (13)
(21)
DIODE LASER
(635 nm)
PMT1
510 nm
GFP FILTER (14)
FOCUSING
OPTICS
(23)
FLUORESCENCE
COLLECTION LENSES (16)
(24)
OPTICAL
FIBER
MULTILINE
ARGON LASER
(488, 514 nm)(20)
DICHROIC
MIRROR
(22)
FLOW
CELL
(17)
RED
FILTER
(19)
EXTINCTION
PHOTODIODE
(18)

FIG. 15

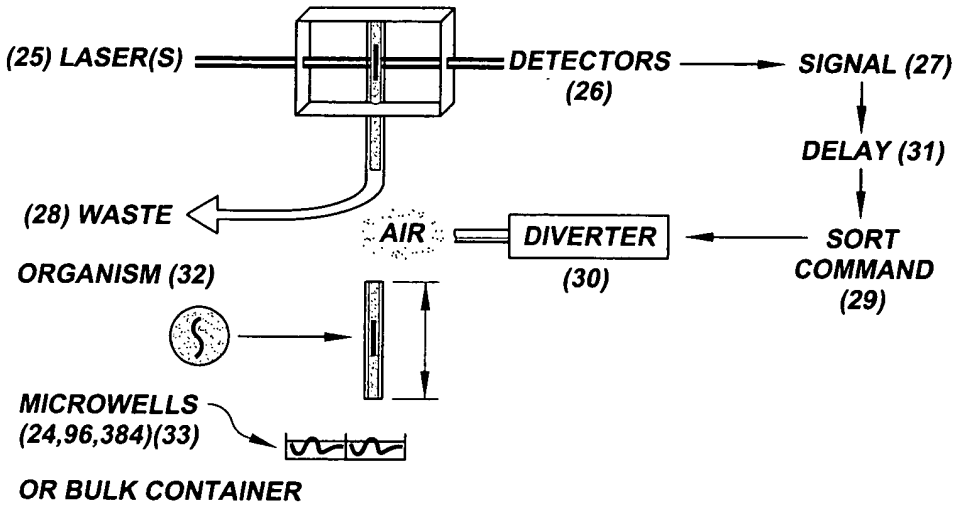

(25) LASER(S)
DETECTORS
(26)
SIGNAL (27)
DELAY (31)
(28) WASTE
AIR
DIVERTER
(30)
SORT
COMMAND
(29)
ORGANISM (32)
MICROWELLS
(24,96,384)(33)
OR BULK CONTAINER

FIG.16

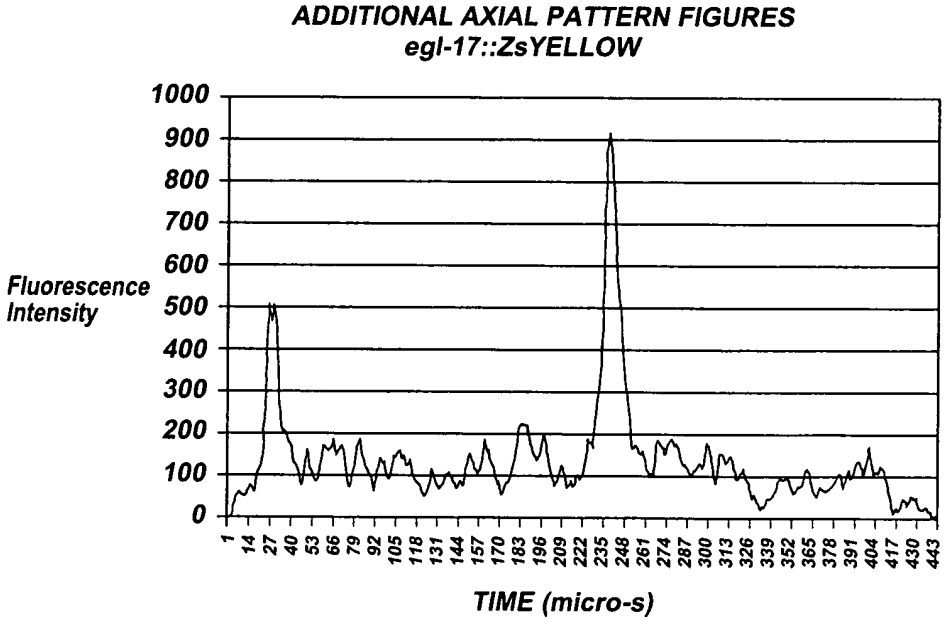

ADDITIONAL AXIAL PATTERN FIGURES
egl-17::ZsYELLOW
Fluorescence Intensity
1000
900
800
700
600
500
400
300
200
100
0
1
14
27
40
53
66
79
92
105
118
131
144
157
170
183
196
209
222
235
248
261
274
287
300
313
326
339
352
365
378
391
404
417
430
443
TIME (micro-s)

FIG.17

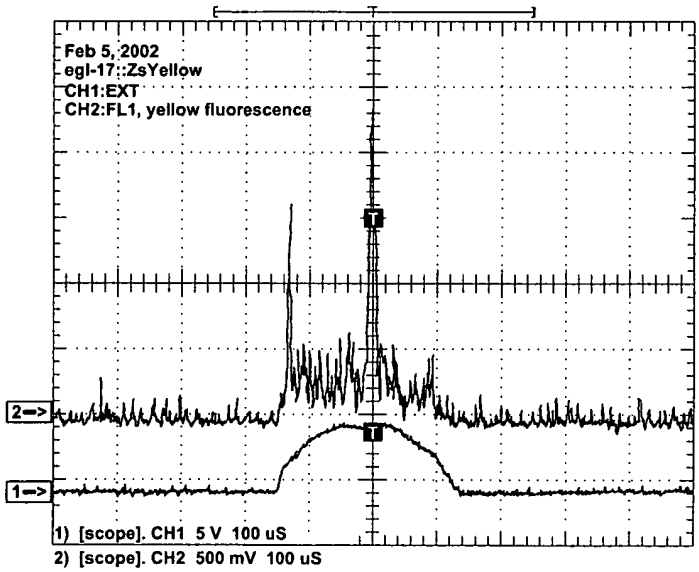
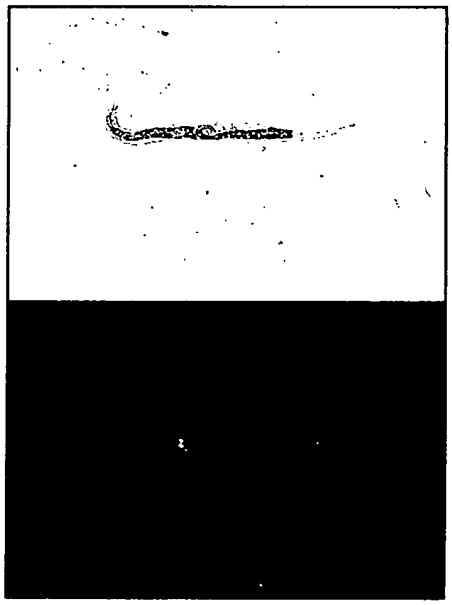

Feb 5, 2002
egl-17::ZsYellow
CH1:EXT
CH2:FL1, yellow fluorescence
2—>
1—>
1) [scope]. CH1 5 V 100 uS
2) [scope]. CH2 500 mV 100 uS

FIG.18



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